IN THE CLAIMS:

1. (Currently Amended) A method for determining and maintaining dialog focus in a conversational speech system comprising the steps of:

maintaining a multi-modal history of events that result from user interaction with one or more user applications of a multi-modal computing system, wherein the events are maintained in chronological order, and wherein the events are linked by event type, wherein an event type includes a change of dialog focus;

receiving and processing a user speech command directed to one of a plurality of the user applications of the multi-modal computing system;

~~presenting a command associated with an application to a dialog manager, the application associated with the command being one of a plurality of active applications that are unknown to the dialog manager;~~

~~the~~ a dialog manager determining a target of the speech command by determining a current context of the speech command by reviewing the a multi-modal history of events;

determining at least one method responsive to the command based on the determined current context; and

executing the at least one method responsive to the command ~~associated with the application; and~~

~~changing dialog focus to one of the active applications based on user interaction with the conversational system.~~

2. (Currently Amended) The method as recited in claim 1, wherein the dialog manager determines a target application type from the current context which is responsive to the command, wherein the target application type is abstracted from the user applications supported by the multi-modal system ~~step of presenting a command includes the step of employing at least one multi-modal device for presenting the command.~~

3. (Currently Amended) The method as recited in claim 1 ~~2~~, <u>comprising receiving input commands from a user interacting with the multi-modal system using a plurality of modalities including</u> ~~wherein the at least one multi-modal device for presenting the command includes one of~~ a telephone, a computer, and a personal digital assistant.

4. (Currently Amended) The method as recited in claim 1, wherein the step of determining a current context of the command by reviewing a multi-modal history of events includes <u>searching</u> ~~the step of providing a linked list of all events in~~ the multi-modal history <u>of events by traversing linked events.</u>

5. (Currently Amended) The method as recited in claim 1 ~~4~~, wherein the events in the multi-modal history <u>of events are linked by time, transaction and class</u> ~~includes at least one of events linked by time, by type, by transaction, by class and by dialog focus~~.

6. (Currently Amended) The method as recited in claim 1, wherein the step of determining at least one method includes the step of referencing ~~all active~~ <u>the user</u> applications <u>of the multi-modal computing system</u> using a component control to determine the at least one method <u>of a user application</u> which is appropriate based on the current context of the <u>speech</u> command.

7. (Currently Amended) The method as recited in claim 1, wherein the <u>speech</u> command is presented in a formal language such that a plurality of human utterances represent an action to be taken.

8. (Currently Amended) The method as recited in claim 1, wherein the step of determining a current context of the command by reviewing a multi-modal history of events includes ~~the step of~~ <u>the dialog manager</u> maintaining a current dialog focus and a list of expected responses<u>, which is used by</u> ~~in~~ the dialog manager to provide a reference for determining the current context.

9. (Original) The method as recited in claim 1, further comprising the step of querying a user for one of information needed to resolve the current context and information needed to take an appropriate action.

10. (Currently Amended) A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for determining and maintaining dialog focus in a conversational speech system, the method steps comprising:

maintaining a multi-modal history of events that result from user interaction with one or more user applications of a multi-modal computing system, wherein the events are maintained in chronological order, and wherein the events are linked by event type, wherein an event type includes a change of dialog focus;

receiving and processing a user speech command directed to one of a plurality of the user applications of the multi-modal computing system;

presenting a command associated with an application to a dialog manager, the application associated with the command being one of a plurality of active applications that are unknown to the dialog manager;

the a dialog manager determining a target of the speech command by determining a current context of the speech command by reviewing the a multi-modal history of events;

determining at least one method responsive to the command based on the determined current context; and

executing the at least one method responsive to the command associated with the application; and

changing dialog focus to one of the active applications based on user interaction with the conversational system.

11. (Currently Amended) The program storage device as recited in claim 10, wherein the dialog manager determines a target application type from the current context which is responsive to the command, wherein the target application type is abstracted from the user

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applications supported by the multi-modal system ~~step of presenting a command includes the step of employing at least one multi-modal device for presenting the command.~~

12. (Currently Amended) The program storage device as recited in claim 10 ~~11~~, comprising instructions for receiving input commands from a user interacting with the multi-modal system using a plurality of modalities including ~~wherein the at-least one multi-modal device for presenting the command includes one of~~ a telephone, a computer, and a personal digital assistant.

13. (Currently Amended) The program storage device as recited in claim 10, wherein the instructions for ~~step of~~ determining a current context of the command by reviewing a multi-modal history of events includes instructions for searching ~~the step of providing a linked list of all events in~~ the multi-modal history of events by traversing linked events.

14. (Currently Amended) The program storage device as recited in claim 10 ~~13~~, wherein the events in the multi-modal history of events are linked by time, transaction and class ~~includes at least one of events linked by time, by type, by transaction, by class and by dialog focus~~.

15. (Currently Amended) The program storage device as recited in claim 10, wherein the instructions for ~~step of~~ determining at least one method includes the step of referencing ~~all active~~ the user applications of the multi-modal computing system using a component control to determine the at least one method of a user application which is appropriate based on the current context of the speech command.

16. (Currently Amended) The program storage device as recited in claim 10, wherein the speech command is presented in a formal language such that a plurality of human utterances represent an action to be taken.

17. (Currently Amended) The program storage device as recited in claim 10, wherein the ~~instructions for~~ instructions for ~~step of~~ determining a current context of the command by reviewing a multi-modal history of events include~~s the step of~~ instructions for the dialog manager maintaining a current dialog focus and a list of expected responses, which is used by ~~in~~ the dialog manager to provide a reference for determining the current context.

18. (Currently Amended) The program storage device as recited in claim 10, further comprising ~~the step of~~ instructions for querying a user for one of information needed to resolve the current context and information needed to take an appropriate action.

19. (Currently Amended) A multi-modal computing system ~~for determining and maintaining dialog focus in a conversational speech system~~ comprising:

a multi-modal history of events to maintain meta information of events that result from user interaction with one or more user applications of the multi-modal computing system, wherein the events are maintained in chronological order, and wherein the events are linked by event type, wherein an event type includes a change of dialog focus;

a dialog manager that maintains a current dialog focus for one of a plurality of user applications and a list of expected responses, wherein the dialog manager determines a target of a speech input event by determining a current context of the speech input event using the multi-modal history of events or the list of expected responses; ~~adapted to receive commands from a user, the dialog manager maintaining a current dialog focus for one of a plurality of active applications and a list of expected responses for determining a current context of the commands received;~~

~~a multi-modal history coupled to the dialog manager for maintaining an event list of all events which affected a state of the system, the multi-modal history adapted to provide input to the dialog manager for determining the current context of the commands received, wherein the events in the multi-modal history include change of dialog focus events;~~ and

a control component adapted to select at least one method responsive to the speech input event based on the target of the speech input event as determined by the dialog manager.

commands received such that the system applies methods responsive to the commands for an appropriate application including one of the active applications.

20. (Currently Amended) The system as recited in claim 19, wherein the <u>control component selects a method associated with an active user application,</u> appropriate application further includes one of an inactive application, an application with a graphical component and an application with other than a graphical component.

21. (Currently Amended) The system as recited in claim 19, wherein the <u>multi-modal history of events maintains meta information of input events including speech and non-speech input events and output events generated by the multi-modal system</u> commands are input to the dialog manager by one of a telephone, a computer, and a personal digital assistant.

22. (Currently Amended) The system as recited in claim 19, <u>wherein the dialog manager determines a current context of the input speech event by traversing linked events in the multi-modal history of events</u> wherein the multi-modal history includes a linked list of all events to associate a given command to the appropriate application.

23. (Currently Amended) The system as recited in claim <u>19</u> 22, <u>wherein events in the multi-modal history of events are further linked by time, transaction and class</u> wherein the events in the multi-modal history include at least one of events linked by time, by type, by transaction, by class and by dialog focus.

24. (Currently Amended) The system as recited in claim 19, wherein the control component references all active <u>the user</u> applications to determine the at least one method which is appropriate based on the current context of <u>an input speech command</u> the commands.

25. (Currently Amended) The system as recited in claim 19, wherein <u>an input speech event</u> the command is presented <u>to the dialog manager</u> in a formal language such that a plurality of human utterances represent an action to be taken.